IN THE SPECIFICATION

Please amend the paragraphs of the specification as follows:

On page 1, please replace the paragraph starting on line 14 with the following paragraph:

It has become very important for service providers to be able to provide high speed wireless services to their customers. A high speed wireless communication system is disclosed in copending U.S. Patent Application Serial No. 08/963,386 (the '386 application), filed November 3, 1997, entitled, "Method and Apparatus For Higher Rate Packet Data ~~Transmission",~~ Transmission," which is assigned to the assignee of the present invention and incorporated by reference herein. In the '386 application, the base station transmits to subscriber stations by sending frames that include a pilot burst time multiplexed in to the frame and transmitted at a rate based on channel information transmitted from the subscriber station to the base station. This system is optimized for the wireless transmission of digital data.

On page 1, please replace the paragraph starting on line 25 with the following paragraph:

Code Division Mulitple Access or CDMA has proven itself to be the predominant choice for wireless service providers because of its high spectral efficiency. One such CDMA communication system is described in the "TIA/EIA/IS-95 Subscriber station-Base Station Compatibility Standard for Dual-Mode Wideband Spread Spectrum Cellular ~~System",~~ System," hereinafter referred to as the IS-95 standard. The IS-95 CDMA system allows for voice and data communications between users over a terrestrial link. The use of CDMA techniques in a multiple access communication system is disclosed in U.S. Patent No. 4,901,307, entitled "SPREAD SPECTRUM MULTIPLE ACCESS COMMUNICATION SYSTEM USING SATELLITE OR TERRESTRIAL ~~REPEATERS",~~ REPEATERS," and U.S. Patent No. 5,103,459, entitled "SYSTEM AND METHOD FOR GENERATING WAVEFORMS IN A CDMA CELLULAR TELEPHONE ~~SYSTEM",~~ SYSTEM," both assigned to the assignee of the present invention and incorporated by reference herein.

On page 2, please replace the paragraph starting on line 16 with the following paragraph:

The subscriber station communicates with at least one base station during a communication. CDMA subscriber stations are capable of communicating with multiple base stations simultaneously during soft handoff. Soft handoff is the process of establishing a link with a new base station before breaking the link with the previous base station. Soft handoff minimizes the probability of dropped calls. The method and system for providing a

communication with a subscriber station through more than one base station during the soft handoff process are disclosed in U.S. Patent No. 5,267,261, entitled "MOBILE ASSISTED SOFT HANDOFF IN A CDMA CELLULAR TELEPHONE SYSTEM," assigned to the assignee of the present invention and incorporated by reference herein. Softer handoff is the process whereby the communication occurs over multiple sectors which are serviced by the same base station. The process of softer handoff is described in detail in ~~copending~~ U.S. Patent ~~Application Serial~~ No. ~~08/763,498~~ 5,933,787, entitled "METHOD AND APPARATUS FOR PERFORMING HANDOFF BETWEEN SECTORS OF A COMMON BASE ~~STATION",~~ STATION," ~~filed December 11, 1996~~ issued August 3, 1999, assigned to the assignee of the present invention and incorporated by reference herein

On page 2, please replace the paragraph starting on line 33 with the following paragraph:

A significant difference between voice services and data services is the fact that the former imposes stringent and fixed delay requirements. Typically, the overall one-way delay of speech frames must be less than 100 msec. In contrast, the data delay can become a variable parameter used to optimize the efficiency of the data communication system. Specifically, more efficient error correcting coding techniques which require significantly larger delays than those that can be tolerated by voice services can be utilized. An exemplary efficient coding scheme for data is disclosed in U.S. Patent No. 5,933,426, entitled "SOFT DECISION OUTPUT DECODER FOR DECODING CONVOLUTIONALLY ENCODED ~~CODEWORDS",~~ CODEWORDS," issued August 3, 1999, assigned to the assignee of the present invention and incorporated by reference herein.

On page 3, please replace the paragraph starting on line 31 with the following paragraph:

It is well known that in cellular systems the signal-to-noise-and- interference ratio C/I of any given user is a function of the location of the user within the coverage area. In order to maintain a given level of service, TDMA and FDMA systems resort to frequency reuse techniques, i.e., not all frequency channels and/or time slots are used in each base station. In a CDMA system, the same frequency allocation is reused in every cell of the system, thereby improving the overall efficiency. The C/I that any given user's subscriber station achieves determines the information rate that can be supported for this particular link from the base station to the user's subscriber station. Given the specific modulation and error correction method used for the transmission, which the present invention seek to optimize for data transmissions, a given level of performance is achieved at a corresponding level of C/I. For an idealized cellular system with hexagonal cell layouts and utilizing a common frequency in every cell, the distribution of C/I achieved within the idealized cells can be calculated.

On page 4, please replace the paragraph starting on line 16 with the following paragraph:

The obtained C/I distribution can only be achieved if, at any instant in time and at any location, the subscriber station is served by the best base station which is defined as that achieving the largest C/I value, regardless of the physical distance to each base station. Because of the random nature of the path loss as described above, the signal with the largest C/I is not always transmitted by the base station closest to the subscriber station. In contrast, if a subscriber station was to communicate only via the base station of minimum distance, the C/I can be substantially degraded. It is therefore beneficial for subscriber stations to communicate to and from the best serving base station at all times, thereby achieving the optimum C/I value. It can also be observed that the range of values of the achieved C/I, in the above idealized model, is such that the difference between the highest and lowest value can be as large as 10,000. In practical implementation the range is typically limited to approximately 1:100 or 20 dB. It is therefore possible for a CDMA base station to serve subscriber stations with information bit rates that can vary by as much as a factor of 100, since the following relationship holds:

$$R_b = W\frac{(C/I)}{(E_b/I_o)}, \qquad (1)$$

where R_b represents the information rate to a particular subscriber station, W is the total bandwidth occupied by the spread spectrum signal, and E_b/I_o is the energy per bit over interference density required to achieve a given level of performance. For instance, if the spread spectrum signal occupies a bandwidth W of 1.2288 MHz and reliable communication requires an average E_b/I_o equal to 3 dB, then a subscriber station which achieves a C/I value of 3 dB to the best base station can communicate at a data rate as high as 1.2288 Mbps. On the other hand, if a subscriber station is subject to substantial interference from adjacent base stations and can only achieve a C/I of -7 dB, reliable communication can not be supported at a rate greater than 122.88 Kbps. A communication system designed to optimize the average throughput will therefore ~~attempts~~ attempts to serve each remote user from the best serving base station and at the highest data rate R_b which the remote user can reliably support. The data communication system of the present invention exploits the characteristic cited above and optimizes the data throughput from the CDMA base stations to the subscriber stations.

On page 10, please replace the paragraph starting on line 28 with the following paragraph:

Referring to the figures, FIG. 2 represents an exemplary embodiment of a data communication system comprising multiple cells ~~**200a-200f**~~ **200A-200F**. Each cell **200** is serviced by a corresponding base station **202** or base station **204**. Base stations **202** are base stations that are in active communication with subscriber station **206** and are said to make up the active set of subscriber station **206**. Base stations **204** are not in communication with subscriber station **206** but have signals with sufficient strength to be monitored by subscriber station **206** for addition to the active set if the strength of the received signals increases due to a change in the propagation path characteristics. Base stations **204** are said to make up the candidate set of subscriber station **206**.

On page 13, please replace the paragraph starting on line 5 with the following paragraph:

A block diagram of the exemplary modulator used to modulate the data is illustrated in FIG. 3B. The I Walsh channels and Q Walsh channels are provided to summers ~~**364a and 364b**~~ **364A and 364B**, respectively, which sum the K Walsh channels to provide the signals I_{sum} and Q_{sum}, respectively. The I_{sum} and Q_{sum} signals are provided to complex multiplier **366**. Complex multiplier **366** also receives the PN_I and PN_Q signals from multipliers ~~**378a and 378b**~~ **378A and 378B**, respectively, and multiplies the two complex inputs in accordance with the following equation :

$$\begin{aligned}(I_{mult} + jQ_{mult}) &= (I_{sum} + jQ_{sum}) \bullet (PN\_I + jPN\_Q) \\ &= (I_{sum} \bullet PN\_I - Q_{sum} \bullet PN\_Q) + j(I_{sum} \bullet PN\_Q + Q_{sum} \bullet PN\_I) \quad ,(1)\end{aligned}$$

where I_{mult} and Q_{mult} are the outputs from complex multiplier **366** and j is the complex representation. The I_{mult} and Q_{mult} signals are provided to filters ~~**368a and 368b**~~ **368A and 368B**, respectively, which filter the signals. The filtered signals from filters ~~**368a and 368b**~~ **370A and 370B** are provided to multipliers ~~**370a and 370b**~~ **370A and 370B**, respectively, which multiply the signals with the in-phase sinusoid $COS(w_c t)$ and the quadrature-phase sinusoid $SIN(w_c t)$, respectively. The I modulated and Q modulated signals are provided to summer **372** which sums the signals to provide the forward modulated waveform S(t).

On page 13, please replace the paragraph starting on line 24 with the following paragraph:

In the exemplary embodiment, the data packet is spread with the long PN code and the short PN codes. The long PN code scrambles the packet such that only the subscriber station 206 for which the packet is destined is able to descramble the packet. In the exemplary embodiment,

the pilot and power control bits and the control channel packet are spread with the short PN codes but not the long PN code to allow all subscriber stations 206 to receive these bits. The long PN sequence is generated by long code generator 374 and provided to multiplexer (MUX) 376. The long PN mask determines the offset of the long PN sequence and is uniquely assigned to the destination subscriber station 206. The output from MUX 376 is the long PN sequence during the data portion of the transmission and zero otherwise (e.g., during the pilot and power control portion). The gated long PN sequence from MUX 376 and the short PNI and PNQ sequences from short code generator 380 are provided to multipliers ~~378a and 378b~~ 378A and 378B, respectively, which multiply the two sets of sequences to form the PN_I and PN_Q signals, respectively. The PN_I and PN_Q signals are provided to complex multiplier 366.

On page 14, please replace the paragraph starting on line 30 with the following paragraph:

An exemplary diagram of the forward link slot structure is shown in FIG. 4B. In the exemplary embodiment, each slot comprises three of the four time multiplexed channels, the traffic channel, the control channel, the pilot channel, and the overhead control channel. In the exemplary embodiment, the pilot signal is transmitted in two bursts and the overhead control channel is transmitted on either side of the second pilot burst. The traffic data is carried in three portions of the slot (~~402a, 402b and 402c~~ 402A, 402B and 402C).

On page 14, please replace the paragraph starting on line 37 with the following paragraph:

The first pilot burst [[**406a**]] **406A** is time multiplexed into the first half of the slot by multiplexer **362**. The second pilot burst [[**406b**]] **406B** is time multiplexed into the second half of the slot. One either side of second pilot burst [[**406b**]] **406B** overhead channel data **408** including the forward activity bit, the busy tones and the power control bits are multiplexed into the slot.

On page 16, please replace the paragraph starting on line 7 with the following paragraph:

Control ~~Processor~~ processor 520 sums the energies from multipath components of a common base station and generates and chip energy to interference ratio for each base station. Control processor 520 then selects the base station with the highest (C/I) and selects a requested rate for that base station. After the base station is selected, the operation described in blocks 106-118 of FIG. 1 is performed by control processor 520.